



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

November 26, 2019

Bonnie Bieber
FMC Corporation
c/o FMC Stine Research Center
1090 Elkton Road
Newark, Delaware 19711

Subject: Registration Review Label Mitigation for Metsulfuron Methyl /Label Amendment
– general clean up
Product Name: Metsulfuron Methyl 20SG
EPA Registration Number: 279-9593
Application Date: 8/13/2018
Decision Numbers: 543426 and 543425

Dear Ms. Bieber:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the 22 Sulfonylurea (SU) Herbicides Interim Decision, and has concluded that your submission is acceptable. The agency also completed review of your amended label referred to above, submitted in connection with registration under FIFRA, as amended, and has determined the label is also acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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EPA Reg. No. 279-9593
Decision No. 543426 and 543425

If you have any questions about this letter, please contact Erik Kraft by phone at 703-308-9358, or via email at kraft.erik@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Erik Kraft". The signature is fluid and cursive, with the first name "Erik" being more prominent than the last name "Kraft".

Erik Kraft, Product Manager 24
Fungicide and Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Enclosure

METSULFURON METHYL 20SG

ACCEPTED
11/26/2019
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 279-9593

HERBICIDE

Dry Flowable

For Use on Wheat, Barley, and Fallow

METSULFURON METHYL | GROUP 2 | HERBICIDE

Active Ingredient

By Weight

Metsulfuron Methyl

Methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2yl)amino]carbonyl]amino]sulfonyl]benzoate20%

Other Ingredients 80%

TOTAL 100%

EPA Reg. No. 279-9593

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION! Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Chemical Resistant Gloves (including butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all \geq 14 mils. Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should: Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

Sold By



FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104

ENVIRONMENTAL HAZARDS

Groundwater Advisory

Metsulfuron Methyl is known to leach through soil into groundwater under certain conditions as a result of label use. Metsulfuron Methyl may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of this product from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Windblown Soil Particles Advisory

This product has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying this product if prevailing local conditions may be expected to result in off-site movement.

Non-target Organism Advisory

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

Coveralls.

Chemical Resistant Gloves (including butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all \geq 14 mils.

Shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses

Keep unprotected persons out of treated areas until sprays have dried

Use Metsulfuron Methyl 20SG herbicide (referred to below as Metsulfuron Methyl 20SG) only in accordance with directions on this label. Always read the entire label, including the Limitation of Warranty and Liability. To the extent consistent with applicable law, FMC will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by FMC.

PRODUCT INFORMATION

Use Metsulfuron Methyl 20SG on wheat, barley, and fallow in most states. Check with your state extension or Dept. of Agriculture before use, to be certain Metsulfuron Methyl 20SG is registered in your state. Metsulfuron Methyl 20SG is not registered for use in Alamosa, Conejos, Costilla, RioGrande, and Saquache counties of Colorado.

Metsulfuron Methyl 20SG is a water soluble granule that controls weeds in wheat (including durum), barley, and fallow. Metsulfuron Methyl 20SG is mixed in water or can be preslurried in water and added to liquid nitrogen carrier solutions and applied as a uniform broadcast spray. Use a surfactant in the spray mix unless otherwise specified on this label. Metsulfuron Methyl 20SG is noncorrosive, nonflammable, nonvolatile, and does not freeze.

Metsulfuron Methyl 20SG controls weeds by postemergence activity. For best results, apply Metsulfuron Methyl 20SG to young, actively growing weeds. The use rate depends upon the weed spectrum and size of weeds at application. The degree and duration of control may depend on the following factors:

- weed spectrum and infestation intensity
- weed size at application
- environmental condition at and following treatment

Environmental Conditions and Biological Activity

Metsulfuron Methyl 20SG is absorbed through the foliage of broadleaf weeds, rapidly inhibiting their growth. Leaves of susceptible plants appear chlorotic from 1 to 3 weeks after application and the growing point subsequently dies.

Application of Metsulfuron Methyl 20SG provides the best control in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not be as satisfactory. However, a crop canopy that is too dense at application can intercept spray and reduce weed control.

Metsulfuron Methyl 20SG may injure crops that are stressed from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions, or cultural practices. In addition, different varieties of the crop may be sensitive to treatment with Metsulfuron Methyl 20SG under otherwise normal conditions. Treatment of such varieties may injure crops.

In warm, moist conditions, the expression of herbicide symptoms is accelerated in weeds; in cold, dry conditions, expression of herbicide symptoms is delayed. In addition, weeds hardened-off by drought stress are less susceptible to Metsulfuron Methyl 20SG.

Weed control may be reduced if rainfall or snowfall occurs soon after application.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If the instructions on the tank mix partner label conflicts with this Metsulfuron Methyl 20SG label, **do not** use in a tank mixture with Metsulfuron Methyl 20SG.

RESTRICTIONS

Injury to or loss of adjacent sensitive crops, desirable trees or vegetation may result from failure to observe the following:

- **Do not** apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots extend, or in locations where the product may be washed or moved into contact with their roots.
- **Do not** use on lawns, walks, driveways, tennis courts, golf courses, athletic fields, commercial sod operations, or other high-maintenance, fine turfgrass areas.
- **Do not** allow sprays to drift to desirable plants
- **Do not** apply this product through any type of irrigation system.
- **Do not** discharge excess material on the soil at a single spot in the field or mixing/loading station.
- **Do not** contaminate any body of water. Thoroughly clean application equipment immediately after use.
- **Do not** use on grain sorghum grown for seed production or syrup.
- **Do not** use on forage sorghum.
- **Do not** use for forage or silage within 30 days of application.
- **Do not** include a surfactant or crop oil to the tank mix.
- **Do not** apply this treatment under cold, wet weather conditions or to grain sorghum growing under stress caused by weather, insects or disease as crop injury may result.
- **Do not** apply to long season grain sorghum varieties or grain sorghum that is planted after July 1, as crop injury or delayed maturity may occur.
- **Do not** use on grasses grown for seed.
- **Do not** apply to irrigated land where tailwater will be used to irrigate crops other than wheat and barley.
- **Do not** apply to frozen ground as surface runoff may occur.
- **Do not** apply to snow-covered ground.
- Metsulfuron Methyl 20SG must be used with 2,4-D; in areas where 2,4-D use is restricted, follow requirement of the restriction. If 2,4-D use is prohibited, **do not** use Metsulfuron Methyl 20SG on grain sorghum.
- To reduce the potential for movement of treated soil due to wind erosion, **do not** apply to powdery dry or light sandy soils until they have been stabilized by rainfall, trashy mulch, reduced tillage, or other cultural practices. Injury to immediately adjacent crops may occur when treated soil is blown onto land used to produce crops other than cereal grains.
- In the Pacific Northwest, to prevent cold weather-related crop injury, avoid making applications during winter months when weather conditions are unpredictable and can be severe. **Do not** apply to wheat, or barley undersown with legumes, as injury to the forage may result.

PRECAUTIONS

- Temporary crop yellowing and/or stunting may occur soon after application, especially when crop is under stress conditions.
- Wheat and barley varieties may differ in their response to various herbicides. FMC advises that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use of Metsulfuron Methyl 20SG to a small area.
- Under certain conditions (including: heavy rainfall, water-saturated soil, prolonged cold weather, wide fluctuations in day/night temperatures pre or post application, severe weather conditions, drought, low fertility, disease, or insect damage) temporary discoloration and/or crop injury may occur. Risk of injury is greatest when crop is in the 2 to 5- leaf stage. **Do not** apply Metsulfuron Methyl 20SG to wheat or barley under these conditions if this crop response is unacceptable
- The combined treatment effects of Metsulfuron Methyl 20SG postemergence preceded by preemergence wild oat herbicides may cause crop injury to spring wheat when crop stress (soil crusting, planting too deep, prolonged cold weather, or drought) causes poor seedling vigor.
- For ground applications applied to weeds when dry, dusty field conditions exist, control of weeds in wheel track areas may be reduced. The addition of 2,4-D or MCPA may improve weed control under these conditions.
- Preplant or preemergence applications of 2,4-D or herbicides containing 2,4-D made within 2 weeks of planting spring cereals may cause crop injury when used in conjunction with early postemergence applications of Metsulfuron Methyl 20SG. For increased crop safety, delay Metsulfuron Methyl 20SG treatment until crop tillering has begun.

WEED RESISTANCE MANAGEMENT

Metsulfuron Methyl 20SG, which contains the active ingredient Metsulfuron methyl, is a group 2 herbicide based on the mode of action classification system of the Weed Science Society of America. Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance. The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, follow as many of these herbicide resistance management practices as is practical:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of Metsulfuron Methyl 20SG for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your FMC representative, local retailer, or county extension agent.
- Contact your FMC representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective sites of actions for each target weed.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 2 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
 - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
 - A spreading patch of non-controlled plants of a particular weed species; and surviving plants mixed with controlled individuals of the same species.
- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 2 herbicides.
- Avoid making more than two applications of Metsulfuron Methyl 20SG and any other Group 2 herbicides within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, including mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

APPLICATION INFORMATION

Restriction: When using Metsulfuron Methyl 20SG in tank mixes or sequential applications with other products containing metsulfuron methyl, **do not** exceed the amount of ai/A in the columns below:

Crop/Use	Application Timing	Maximum Product Oz/A per Single Application	Maximum AI lb/A per Single Application	Maximum Oz/A of Product per Year	Maximum AI lb/A per Year	Maximum Number of Applications per Year	Minimum Treatment Interval (Days)	Pre- Harvest Interval, Days
Fallow	In the spring or fall when most weeds have emerged and actively growing	0.30	0.0038	0.30	0.0038	1	-	NA
Dryland wheat, barley	After the crop is in the 2 leaf stage, but before boot once per use season	0.30	0.0038	0.30	0.0038	1	-	No grazing restrictions
Durum variety spring wheat	After the crop is tillering, but before boot once per use season	0.30	0.0038	0.30	0.0038	1	-	No grazing restrictions
Irrigated Wheat and Barley	Make applications after the crop begins tillering but before boot. Delay first post- treatment irrigation for at least 3 days after treatment and do not exceed 1 in. of water	0.30	0.0038	0.30	0.0038	1	-	No grazing restrictions
Triticale	Postemergence application to triticale anytime after crop is in the 2-3 leaf stage but before the flag leaf is visible	0.30	0.0038	0.30	0.0038	1	-	No grazing restrictions
Wheat, barley – Harvest Aid	In combination with 2,4-D or glyphosate after the crop has reached the hard dough stage, but no later than 10 days before harvest	0.30	0.0038	0.30	0.0038	1	-	10 days
Grain Sorghum (dryland or irrigated in the states Colorado, Kansas, Nebraska, Oklahoma, and Texas – North of I-20)	Apply Metsulfuron Methyl 20SG plus 2,4-D amine when grain sorghum is 3 to 15 inches in height. If sorghum is taller than 10 inches to the top of the canopy, use drop nozzles and keep spray off the foliage. Apply only before the boot stage.	0.30	0.0038	0.30	0.0038	1	-	Do not use for forage or silage within 30 days of application
Weed Control in Sugar Cane in the State of Hawaii	For best weed control or weed suppression, apply Metsulfuron Methyl 20SG as a preplant/ preemergence broadcast application or as postemergence direct spray application to weeds when environmental conditions favor active growth of broadleaf weeds.	10	0.1250	18.75	0.2344	2	14	16 months

Use Rates

Wheat (including durum) and Barley

Apply 0.3 oz Metsulfuron Methyl 20SG per acre (0.0038 lb ai/A) to wheat or barley.

Harvest Aid

Apply 0.3 oz Metsulfuron Methyl 20SG per acre (0.0038 lb ai/A) in combination with 2,4-D to aid in dry down of many broadleaved weeds, thereby aiding grain harvest.

Fallow

Apply Metsulfuron Methyl 20SG at 0.3 oz per acre (0.0038 lb ai/A).

Application Timing—Wheat and Barley

Dryland Wheat and Barley (Except Durum or Wampum Variety)

Make applications after the crop is in the 2-leaf stage but before boot.

Durum and Wampum Variety Spring Wheat

Make applications after the crop is tillering but before boot. Make applications to durum and wampum varieties in combination with 2,4-D.

Irrigated Wheat and Barley

Make applications after the crop begins tillering but before boot. Delay first post-treatment irrigation for at least 3 days after treatment and remain below 1 in. of water

Wheat and Barley—Harvest Aid

Make applications after the crop has reached the hard dough stage, but no later than 10 days before harvest. See section on Harvest Aid tank mixtures.

Fallow

Metsulfuron Methyl 20SG may be used as a fallow treatment, in the spring or fall when most weeds have emerged and are actively growing.

Restrictions:

- **Do not** apply during boot or early heading, as crop injury may result.

WEEDS CONTROLLED

Unless otherwise directed, treat when weeds are less than 4" tall or in diameter and are actively growing.

Effectiveness may be reduced if rainfall occurs within 4 hrs after application.

Cereals and Fallow (0.3 oz/A (0.0038 lb ai/A))		
Blue/purple mustard*	Groundsel (common)	Smallseed falseflax
Bur buttercup (testiculate)	Henbit	Smartweed (green, ladysthumb, pale)
Coast fiddleneck (tarweed)	Kochia*	Snow speedwell
Common chickweed	Lambsquarters (common, slimleaf)	Tansymustard*
Common purslane	Mayweed chamomile	Treacle mustards (Bushy Wallflower)
Conical catchfly	Miners lettuce	Tumble/Jim Hill mustard
Cowcockle	Pigweed (redroot, smooth, tumble)	Volunteer sunflower
False chamomile	Plains coreopsis	Waterpod
Field pennycress (fanweed)	Prickly lettuce*	Wild mustard
Filaree	Russian thistle*	
Flixweed*	Shepherd's purse	
Weeds Suppressed ‡*		
Cereals and Fallow		
0.3 oz per acre (0.0038 lb ai/A)		
Canada thistle*	Corn groomwell*	Sowthistle (annual)*
Common sunflower*	Knotweed (prostrate)*	Wild buckwheat*
Brush Suppressed ‡		
0.9 oz/A (0.0112 lb ai/A)		
Blackberry	Dewberry	Multiflora rose*

*See the **Specific Weed Problems** section.

‡ Weed suppression is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of suppression varies with the rate used, the size of the weeds, and the environmental conditions following treatment.

Specific Weed Instructions

Note: Thorough spray coverage of all weed species listed below is very important.

Blue Mustard, Flixweed, and Tansymustard: For best results, apply Metsulfuron Methyl 20SG tank mixtures with 2,4-D or MCPA postemergence to mustards, but before bloom.

Canada Thistle and Sowthistle: Apply either Metsulfuron Methyl 20SG plus surfactant or Metsulfuron Methyl 20SG plus 2,4-D or MCPA in the spring after most thistles have emerged and are small (rosette stage to 6" elongating stems) and actively growing. The application will inhibit the ability of emerged thistles to compete with the crop.

Corn Gromwell and Prostrate Knotweed: Apply Metsulfuron Methyl 20SG plus surfactant when weeds are actively growing, are no larger than 2" tall, and when crop canopy will allow thorough coverage. Tank mixing 2,4-D or MCPA with Metsulfuron Methyl 20SG can improve results.

Kochia, Russian thistle, Prickly lettuce: Naturally occurring resistant biotypes of these weeds are known to occur. For best results, apply Metsulfuron Methyl 20SG in a tank mix with Dicamba and 2,4-D, or bromoxynil and 2,4-D containing products. Apply Metsulfuron Methyl 20SG in the spring when kochia, Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing (refer to the Tank Mixtures section of this label for additional details).

Sunflower (common/volunteer): Apply either Metsulfuron Methyl 20SG plus surfactant or Metsulfuron Methyl 20SG plus 2,4-D or MCPA after most sunflowers have emerged, are 2" to 4" tall and are actively growing. Use spray volumes of at least 3 gal by air or 5 gal by ground.

Wild Buckwheat: For best results, apply Metsulfuron Methyl 20SG plus 2,4-D or MCPA when plants have no more than 3 true leaves (not counting the cotyledons). If plants are not actively growing, delay treatment until environmental conditions favor active weed growth.

Musk Thistle: Apply Metsulfuron Methyl 20SG at 0.6 to 0.9 oz per acre (0.0045 to 0.0112 lb ai/A) in the spring or early summer prior to flowering or in the fall after newly emerged plants have reached the rosette stage of growth. Make Fall applications before the soil freezes.

Multiflora Rose: For best control, apply Metsulfuron Methyl 20SG as a broadcast application when multiflora rose is less than 3' tall. Make Spring application, soon after multiflora rose is fully leafed.

Serecia lespedeza: Apply Metsulfuron Methyl 20SG at 1.2 oz per acre (0.0150 lb ai/A) plus a surfactant at 1 to 2 qt per 100 gal of total spray solution. For best results, apply to serecia lespedeza beginning at flower bud initiation through the full bloom stage of growth.

Note: Do not make applications if drought conditions exist at intended time of application.

Wild Garlic: Apply 0.3 to 0.6 oz per acre (0.0038 to 0.0045 lb ai/A) of Metsulfuron Methyl 20SG in the early spring when wild garlic is less than 12" tall with 2" to 4" of new growth.

Woolly Croton: Apply 0.3 to 0.6 oz per acre (0.0038 to 0.0045 lb ai/A) of Metsulfuron Methyl 20SG in the late spring or early summer at preemergence through 2 true leaf stage.

Surfactants

Unless otherwise directed, add an FMC specified nonionic surfactant having at least 80% active ingredient at 1 to 2 qt per 100 gal of spray solution (0.25 to 0.5% v/v).

Exception: On all spring wheat and spring or winter barley use 1/2 to 1 qt per 100 gals. Consult your agricultural dealer, applicator, or FMC representative for a listing of specified surfactants. Antifoaming agents may be used if needed. **Do not** use low rates of liquid fertilizer as a substitute for surfactant.

Ground Application

To obtain optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles.

For flood nozzles on 30" spacings, use at least 10 gallons per acre (GPA), flood nozzles no larger than TK10 (or equivalent), and a pressure of at least 30 pounds per square inch (psi). For 40" nozzle spacings, use at least 13 GPA; for 60" spacings, use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.

With "Raindrop RA" nozzles, use at least 30 GPA and ensure that nozzle spray patterns overlap 100%.

For flat-fan nozzles, use at least 3 GPA for applications to wheat or barley.

Use 50-mesh screens or larger.

Aerial Application

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage.

Wheat, Barley and Fallow: Use 1 to 5 GPA. Use at least 3 GPA in Idaho, Oregon, or Utah.

Product Measurement

Metsulfuron Methyl 20SG is measured using the Metsulfuron Methyl 20SG volumetric measuring cylinder. The degree of accuracy of this cylinder varies by +/- 7.5%. For more precise measurement, use scales calibrated in ounces.

TANK MIXTURES

Metsulfuron Methyl 20SG may be tank mixed with other suitable registered herbicides to control weeds listed under **Weeds Suppressed**, weeds resistant to Metsulfuron Methyl 20SG, or weeds not listed under **Weeds Controlled**.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If the instructions on the tank mix partner label conflicts with this Metsulfuron Methyl 20SG label, **do not** use in a tank mixture with Metsulfuron Methyl 20SG.

Tank Mixtures in Cereals (Wheat and Barley)

With 2,4-D (amine or ester) or MCPA (amine or ester)

Use Metsulfuron Methyl 20SG as a tank-mix treatment with 2,4-D or MCPA (ester formulations provide best results) herbicides after weeds have emerged. For best results, use 0.3 oz of Metsulfuron Methyl 20SG per acre (0.0038 lb ai/A.); add 2,4-D or MCPA herbicides to the tank at labeled rates. Surfactant may be added to the mixture at 1/2 to 1 qt per 100 gal of spray solution; however, adding surfactant may increase the potential for crop injury.

Apply Metsulfuron Methyl 20SG plus MCPA after the 3 to 5- leaf stage but before boot (with Durum and Wampum varieties **do not** apply before tillering). Apply Metsulfuron Methyl 20SG plus 2,4-D after tillering (refer to appropriate 2,4-D manufacturer's label), but before boot.

With Dicamba

For best results, apply Metsulfuron Methyl 20SG at 0.3 oz per acre; (0.0038 lb ai/A. add Dicamba at labeled rates. Surfactant may be added to the mixture at 1/2 to 1 qt per 100 gal of spray solution; however, adding surfactant may increase the potential for crop injury. Refer to the tank mix partner label for rates, use instructions and restrictions.

With 2,4-D (amine or ester) and Dicamba

Metsulfuron Methyl 20SG may be applied in a 3-way tank mix with formulations of Dicamba and 2,4-D. Refer to the tank mix partner label for rates, use instructions and restrictions.

Make applications at 0.3 oz (0.0038 lb ai/A) Metsulfuron Methyl 20SG plus products containing the active ingredient dicamba plus products containing the active 2,4-D ester or amine at labeled rates per acre. Use higher rates when weed infestation is heavy. Add 1-2 pints of surfactant to the 3 way mixture, where necessary, as deemed by local specifications. Use of additional surfactant may not be needed with the higher phenoxy rates and ester phenoxy formulations. Refer to the tank mix partner labels for rates and further use instructions.

Apply this 3-way combination to winter wheat after the crop is tillering and prior to jointing (first node). In Spring Wheat (including Durum wheat) apply after the crop is tillering and before it exceeds the 5-leaf stage.

Do not apply this 3-way mixture at high rates more than once a year or more than twice per year at the low rates.

With bromoxynil containing products

Metsulfuron Methyl 20SG may be tank mixed with bromoxynil containing herbicides registered for use on wheat, barley, or fallow. For best results, add bromoxynil containing herbicides to the tank at labeled rates per acre

Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using these tank mixtures. Follow the most restrictive labeling.

With grass control products

Tank mixtures of Metsulfuron Methyl 20SG and grass control products may result in poor grass control. FMC advises that you first consult your state experiment station, university, or extension agent, Agricultural dealer, or FMC representative as to the potential for antagonism before using the mixture. If no information is available, limit the initial use of Metsulfuron Methyl 20SG and the grass product to a small area.

Restrictions:

- **Do not** tank mix Metsulfuron Methyl 20SG with Hoelon 3EC, as grass control may be reduced.

With Express® herbicide (with TotalSol® Soluble Granules)

Metsulfuron Methyl 20SG may be tank mixed with Express® herbicide (with TotalSol® Soluble Granules) based on local specifications.

With Harmony® Extra SG (with TotalSol® Soluble Granules)

Metsulfuron Methyl 20SG may be tank mixed with Harmony Extra SG (with TotalSol® Soluble granules) based on local specifications. Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using this tank mixture.

With Insecticides and Fungicides

Metsulfuron Methyl 20SG may be tank mixed or used sequentially with insecticides and fungicides registered for use on cereal grains. However, under certain conditions (drought stress, cold weather, or if the crop is in the 2 to 4 leaf stage), tank mixes or sequential applications of Metsulfuron Methyl 20SG with organophosphate insecticides may produce temporary crop yellowing or, in severe cases, crop injury. The potential for crop injury is greatest when wide fluctuations in day/night temperatures occur just prior to or soon after application. Test these mixtures in a small area before treating large areas.

Restrictions:

- **Do not** apply Metsulfuron Methyl 20SG within 60 days of crop emergence where an organophosphate insecticide has been applied as an in-furrow treatment, as crop injury may result.
- **Do not** use Metsulfuron Methyl 20SG plus Malathion, as crop injury will result.

With Liquid Nitrogen Solution Fertilizer

Liquid nitrogen fertilizer solutions may be used as a carrier in place of water. Run a tank mix compatibility test before mixing Metsulfuron Methyl 20SG in fertilizer solution. Metsulfuron Methyl 20SG must first be slurried with water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the Metsulfuron Methyl 20SG is added. Use of this mixture may result in temporary crop yellowing and stunting.

If using low rates of liquid nitrogen fertilizer in the spray solution (less than 50% of the spray solution volume), the addition of surfactant is necessary. Add surfactant at labeled rates based on local specifications.

When using high rates of liquid nitrogen fertilizer in the spray solution, adding surfactant increases the risk of crop injury. Consult your agricultural dealer, consultant, fieldman, or FMC representative for specific directions before adding an adjuvant to these tank mixtures.

If 2,4-D or MCPA is included with Metsulfuron Methyl 20SG and fertilizer mixture, ester formulations tend to be more compatible (See manufacturer's label).

Restrictions:

- **Do not** use low rates of liquid fertilizer as a substitute for a surfactant.
- **Do not** use with liquid fertilizer solutions with a pH less than 3.0.

Tank Mixtures in Harvest Aid

A tank mix of Metsulfuron Methyl 20SG plus 2,4-D and surfactant, or glyphosate, will typically aid in dry down of many broadleaved weeds, thereby aiding grain harvest. Make Postemergence application to actively growing weeds after the crop is in the hard dough stage. If weeds are not dry within 10 days after application, delay harvest until weeds are dry.

See weeds listed in Weeds Controlled section of this label.

With 2,4-D

Use 0.3 oz Metsulfuron Methyl 20SG (0.0038 lb ai/A.) plus 2,4-D at labeled rates per acre on moderate weed infestations; higher rates of 2,4-D may be used on large weeds if permitted by the 2,4-D brand labeling. Include 1 to 2 qt surfactant per 100 gal spray solution.

In addition to the weeds listed in Weeds Controlled chart of this label, the 2,4-D combination will also dry down common cocklebur, marehail, puncturevine and common and wild sunflower. In areas where 2,4-D use is restricted, apply Metsulfuron Methyl 20SG with surfactant only; however, this treatment may be less effective.

With Glyphosate

Use 0.3 oz Metsulfuron Methyl 20SG (0.0038 lb ai/A.) plus glyphosate at labeled rates. Metsulfuron Methyl 20SG requires the use of an adjuvant for optimum activity. Refer to the tank mix partner labels for rates and further use instructions.

Tank Mixtures in Fallow

Metsulfuron Methyl 20SG may be used as a fallow treatment and may be tank mixed with other herbicides that are registered for use in fallow. Read and follow all manufacturer's label directions for the companion herbicide. If those directions conflict with this label, **do not** tank mix the herbicide with Metsulfuron Methyl 20SG.

CROP ROTATION

Before using Metsulfuron Methyl 20SG, carefully consider your crop rotation plans and options. For rotational flexibility, do not treat all of your wheat, barley, or fallow, acres at the same time.

Minimum Rotational Intervals

Minimum rotation intervals* are determined by the rate of breakdown of Metsulfuron Methyl 20SG applied. Metsulfuron Methyl 20SG breakdown in the soil is affected by soil pH, presence of soil microorganisms, soil temperature, and soil moisture. Low soil pH, high soil temperature, and high soil moisture increase Metsulfuron Methyl 20SG breakdown in soil, while high soil pH, low soil temperature, and low soil moisture slow Metsulfuron Methyl 20SG breakdown.

Of these 3 factors, only soil pH remains relatively constant. Soil temperature, and to a greater extent, soil moisture, can vary significantly from year to year and from area to area. For this reason, monitor soil temperatures and soil moisture regularly when considering crop rotations.

* The minimum rotation interval represents the period of time from the last application to the anticipated date of the next planting.

Soil pH Limitations

Do not use Metsulfuron Methyl 20SG on soils having a pH above 7.9, as extended soil residual activity could extend crop rotation intervals beyond normal. Under certain conditions, Metsulfuron Methyl 20SG could remain in the soil for 34 months or more, injuring wheat and barley. In addition, other crops planted in high-pH soils can be extremely sensitive to low concentrations of Metsulfuron Methyl 20SG.

Checking Soil pH

Before using Metsulfuron Methyl 20SG, determine the soil pH of the areas of intended use. To obtain a representative pH value for the test area, take several 0" to 4" samples from different areas of the field and analyze them separately. Consult local extension publications for additional information on advised soil sampling procedures.

Rotational Intervals for Cereals

All Areas - Following Use of Metsulfuron Methyl 20SG at 0.3 oz per Acre (0.0038 lb ai/A)

Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
Winter and spring wheat	7.9 or lower	No restrictions	1
Durum wheat, barley, spring/winter oat	7.9 or lower	No restrictions	10

Rotation Intervals For Crops in Non-Irrigated Land

Following Use of Metsulfuron Methyl 20SG at 0.3 oz per Acre (0.0038 lb ai/A) on Wheat, Barley, or Fallow

Location		Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
State	County or Area				
Colorado	Statewide	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
	Generally N. of I-70	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
		Field corn	7.9 or lower	15	12
Idaho	Southern Idaho	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Statewide	Peas Lentils Canola	6.8 or lower	18	10
		Peas	6.9 to 7.9	18	15
		Lentils	6.9 to 7.9	18	34
		Canola	6.9 to 7.9	18	22
Kansas	Statewide	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Central and Western Kansas (West of the Flint Hills)	Field corn	7.9 or lower	15	12
	Western Kansas W. of Hwy. 183	Soybeans	7.5 or lower 7.6-7.9	22 33	22 34
	Central Kansas; generally E. of Hwy. 183 and W. of the Flinthills	Soybeans	7.9 or lower	15	12
Montana	Statewide	Grain sorghum, Proso millet, Field corn	7.9 or lower	22	22
		Alfalfa (hay only)	7.6-7.9	No restrictions	34
			7.5 or lower	No restrictions	22
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
Nebraska	Statewide	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Generally W. of Hwy. 77 and E. of the Panhandle	Field corn	7.9 or lower	15	12
		Soybeans	7.5 or lower	22	22
			7.6-7.9	33	34

Location		Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
State	County or Area				
New Mexico	Statewide	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Eastern New Mexico	Cotton (dryland only)	7.9 or lower	30	22
North Dakota	W. of Hwy. 1	Grain sorghum, Proso millet, Field corn, Dry beans, Flax, Safflower, Sunflower	7.9 or lower	22	22
	E. of Hwy. 1	Grain sorghum, Proso millet, Field corn, Dry beans, Flax, Safflower, Sunflower	7.9 or lower	34	34
Oklahoma	Statewide	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
		Field corn	7.9 or lower	15	12
	Panhandle	Cotton (dryland only)	7.9 or lower	30	22
	E. of the Panhandle	Cotton (dryland only)	7.9 or lower	25	14
Oregon	Statewide	Peas Lentils Canola	6.8 or lower	18	10
		Peas	6.9 to 7.9	18	15
		Lentils	6.9 to 7.9	18	34
		Canola	6.9 to 7.9	18	22
South Dakota	Statewide	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	S. of Hwy. 212 & E. of the Missouri River, & S. of Hwy. 34 & W. of Missouri River	Grain sorghum, Proso millet	7.9 or lower	13	12
	Generally E. of Missouri River & S. of Hwy. 14, & W. of Missouri River	Field corn	7.9 or lower	15	12
Texas	Statewide	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
		Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Panhandle	Field corn	7.9 or lower	15	12
		Cotton (dryland only)	7.9 or lower	30	22
	N. Central Texas*	Field corn	7.9 or lower	15	12
		Cotton (dryland only)	7.9 or lower	25	14
* The counties of N. Central Texas are: Archer, Baylor, Bell, Bosque, Bowie, Callahan, Camp, Cass, Clay, Collin, Cooke, Coryell, Dallas, Delta, Denton, Eastland, Ellis, Falls, Fannin, Foard, Franklin, Grayson, Hardeman, Haskell, Hill, Hood, Hopkins, Hunt, Jack, Johnson, Kaufman, Knox, Lamar, Limestone, McLennan, Milam, Montague, Morris, Nafarro, Palo Pinto, Parker, Rains, Red River, Robertson, Rockwall, Shackelford, Somervell, Stephens, Tarrant, Throckmorton, Titus, Upshur, Van Zandt, Wilbarger, Wichita, Williamson, Wise, Wood, Young.					

Location		Crop	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (months)
State	County or Area				
Washington	Statewide	Peas Lentils Canola	6.8 or lower	18	10
		Peas	6.9 to 7.9	18	15
		Lentils	6.9 to 7.9	18	34
		Canola	6.9 to 7.9	18	22
Utah	Statewide	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
Wyoming	Statewide	Flax, Safflower, Sunflower	7.9 or lower	No restrictions	22
	Southern Wyoming	Grain sorghum, Proso millet	7.9 or lower	No restrictions	10
	Southern Wyoming (Goshen, Laramie, and Platte counties only)	Field corn	7.9 or lower	15	12
	Northern Wyoming	Field corn, Grain sorghum, Proso millet	7.9 or lower	22	22

Rotation Intervals not covered above - The minimum rotation interval is 34 months with at least 28" of cumulative precipitation during the period:

- to any major field crop not listed (See the Rotation Intervals table)
- if the soil pH is not in the specified range
- if the use rate applied is not specified in the table
- or if the minimum cumulative precipitation has not occurred since application.

To rotate to a major field crop at an interval shorter than advised, a field bioassay must be successfully completed to that crop. A field bioassay must be successfully completed before rotation to any minor crops (as determined by the USDA criteria). See section on Field Bioassay for further information.

WEED CONTROL IN GRAIN SORGHUM

Use Metsulfuron Methyl 20SG on irrigated or dryland grain sorghum in Colorado, Kansas, Nebraska, Oklahoma and Texas (North of I-20).

WEED CONTROL, RATES AND TIMING OF APPLICATION

Crop Stage: For optimum performance and crop safety, apply Metsulfuron Methyl 20SG plus 2,4-D amine when grain sorghum is 3 to 15 inches in height. If sorghum is taller than 10 inches to the top of the canopy, use drop nozzles and keep spray off the foliage. Apply only before the boot stage.

Read and follow all other use instructions, warnings and precautions on companion herbicide labels.

Sorghum varieties vary in sensitivity to 2,4-D amine. Spray only varieties known not to be sensitive to 2,4-D amine. Contact seed company and Local County Extension Service for this information.

Application Rates: Apply Metsulfuron Methyl 20SG at 0.15 oz per acre (0.0019 lb ai/A) plus 2,4-D amine at labeled rates per acre. **Do not** use surfactant or crop oil.

Pest Stage: Make application of Metsulfuron Methyl 20SG plus 2,4-D amine when all or a majority of the weeds have germinated and emerged. For best results, spray when weeds are less than 6 inches tall.

Weeds Controlled with Tank Mix Of Metsulfuron Methyl 20SG plus 2,4-D amine:

Pigweed species Puncture vine Velvetleaf

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If the instructions on the tank mix partner label conflicts with this Metsulfuron Methyl 20SG label, **do not** use in a tank mixture with Metsulfuron Methyl 20SG.

APPLICATION INFORMATION

Metsulfuron Methyl 20SG herbicide may be applied to grain sorghum by properly calibrated ground or aerial equipment.

Ground Application: Apply uniformly by ground with a properly calibrated low pressure (20-40 PSI) boom sprayer equipped with flat fan nozzles. Use 10-30 GPA with ground equipment.

Aerial Application: Use orifice discs, cores and nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage at 2 to 5 GPA.

Metsulfuron Methyl 20SG can be used on either dryland or irrigated grain sorghum. If application is made to irrigated sorghum, delay first post-treatment irrigation for at least 3 days after treatment. **Do not** exceed 1" for the first post-treatment irrigation.

Use cultivation prior to Metsulfuron Methyl 20SG + 2,4-D amine treatment to cover exposed brace roots of grain sorghum to minimize injury from 2,4-D amine.

RESTRICTIONS

- **Do not** use on grain sorghum grown for seed production or syrup.
- **Do not** use on forage sorghum.
- **Do not** use for forage or silage within 30 days of application.
- **Do not** include a surfactant or crop oil to the tank mix.
- **Do not** apply this treatment under cold, wet weather conditions or to grain sorghum growing under stress caused by weather, insects or disease as crop injury may result.
- **Do not** apply to long season grain sorghum varieties or grain sorghum that is planted after July 1, as crop injury or delayed maturity may occur.
- **Do not** exceed one (1) application per year.

PRECAUTIONS

- Temporary crop yellowing and/or stunting may occur soon after application, especially when crop is under stress conditions.
- Metsulfuron Methyl 20SG must be used with 2,4-D. In areas where 2,4-D use is restricted, follow requirement of the restriction. If 2,4-D use is prohibited, **do not** use Metsulfuron Methyl 20SG on grain sorghum.

FOR USE ON TRITICALE

Metsulfuron Methyl 20SG may be used as a postemergence application to triticale anytime after crop is in the 2-3 leaf stage but before the flag leaf is visible. Follow the postemergence use rate instructions listed for wheat. Refer to the Metsulfuron Methyl 20SG label for information regarding use restrictions, rotational cropping specifications, sprayer cleanup, use precautions and other information.

Other suitable herbicides, fungicides, and insecticides registered for use on triticale may be tank mixed or used sequentially with these products providing the specified application timing is the same. Read and follow all manufacturer's label directions for the tank mix partner prior to use. The most restrictive provisions on either label apply.

WITH *Maverick*® HERBICIDE

Metsulfuron Methyl 20SG can be tank mixed with *Maverick* herbicide for improved control of weeds in wheat.

Refer to the Metsulfuron Methyl 20SG label, and the *Maverick* herbicide label for information regarding use restrictions, labeled crops, rotational cropping directions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. **Do not** use the tank mix if any restrictions on the *Maverick* herbicide label conflict with directions on the FMC herbicide label.

Other suitable registered herbicides, fungicides, and insecticides registered for use on small grains or fallow may be tank mixed or used sequentially with this mixture. Read and follow all manufacturer's label directions for the companion herbicide.

The most restrictive provisions on either label will apply.

WITH *COLT*®+*SALVO*® HERBICIDE

For improved control of Kochia (2-4" tall), Russian thistle, mustard species and wild buckwheat, Metsulfuron Methyl 20SG may be tank mixed *Colt*+*Salvo* Herbicide at labeled rates. Refer to the Metsulfuron Methyl 20SG label, and the *Colt*+*Salvo* Herbicide label for information regarding use restrictions, labeled crops, rotational cropping directions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. **Do not** use the tank mix if any restrictions on the *Colt*+*Salvo* Herbicide label conflict with directions on the Metsulfuron Methyl 20SG label.

Other suitable registered herbicides, fungicides, and insecticides registered for use on small grains or fallow may be tank mixed or used sequentially with this mixture. Read and follow all manufacturer's label directions for the companion herbicide. The most restrictive provisions on either label will apply.

WITH COLT®+SWORD® HERBICIDE

For improved control of Kochia (2-4" tall) Russian thistle, mustard species and wild buckwheat, Metsulfuron Methyl 20SG may be tank mixed with Colt + Sword Herbicide at labeled rates. Refer to the Metsulfuron Methyl 20SG label, and the Colt + Sword Herbicide label for information regarding use restrictions, labeled crops, rotational cropping directions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. **Do not** use the tank mix if any restrictions on the Colt + Sword Herbicide label conflict with directions on the Metsulfuron Methyl 20SG label.

Other suitable registered herbicides, fungicides, and insecticides registered for use on cereal grains or fallow may be tank mixed or used sequentially with this mixture. Read and follow all manufacturer's label directions for the companion herbicide. The most restrictive provisions on either label will apply.

WITH "STARANE" (Starane® Flex herbicide, Starane® NXT herbicide).

For improved control of Kochia (2-4" tall), Russian thistle, mustard species, and wild buckwheat FMC small grain herbicides may be tank mixed with "Starane" at labeled rates. Refer to the Metsulfuron Methyl 20SG label, and the "Starane" labels for information regarding use restrictions, labeled crops, rotational cropping directions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. **Do not** use the tank mix if any restrictions on the "Starane" labels conflict with directions on the Metsulfuron Methyl 20SG label.

Other suitable registered herbicides, fungicides, and insecticides registered for use on small grains or fallow may be tank mixed or used sequentially with this mixture. Read and follow all manufacturer's label directions for the companion herbicide. The most restrictive provisions on either label will apply.

REDUCED ROTATION INTERVAL FOR CONDIMENT MUSTARD AND CHICKPEAS (GARBANZO BEANS) IN THE STATES OF IDAHO, OREGON, AND WASHINGTON

In wheat, barley and fallow where 0.3 oz per acre of Metsulfuron Methyl 20SG has been applied, the following minimum crop rotation interval* can be followed:

Soil pH	Minimum precipitation between application and planting	Rotation Interval (months)*
7.3 or lower	10 inches	10
7.4 or higher	28 inches	34

* The rotation interval represents the period of time from the last application to the anticipated date of the next planting. Rotation intervals must be extended 1 crop season if drought conditions prevail after application and before the rotational crop is planted, unless a successful field bioassay has been completed (see Metsulfuron Methyl 20SG label for details).

Restrictions

- Wherever Metsulfuron Methyl 20SG is used on land previously treated with longer residual herbicides having the same mode of action, read the rotational guidelines on both labels and follow the one with the longest interval stated for your situation before choosing to rotate to crops other than wheat or barley.

ROTATION INTERVAL TO GRAIN SORGHUM, SULFONYLUREA TOLERANT (STS) SOYBEAN, IMIDAZOLINONE-RESISTANT (IR) CORN, PROSO MILLET

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

CROP ROTATION

Minimum Rotation Intervals

Minimum rotation intervals* are determined by the rate of breakdown of Metsulfuron Methyl 20SG applied.

Metsulfuron Methyl 20SG breakdown in the soil is affected by soil pH, soil temperature, soil microorganisms, and soil moisture. Low soil pH, high soil temperature, and high soil moisture increase Metsulfuron Methyl 20SG breakdown in soil, while high soil pH, low soil temperature, and low soil moisture slow Metsulfuron Methyl 20SG breakdown. Of these three factors, only soil pH remains relatively constant.

Soil temperature, and to a greater extent, soil moisture, can vary significantly from year to year and from area to area. For this reason, monitor soil temperatures and soil moisture regularly when considering rotating to other crops.

Soil pH Limitations

Do not use Metsulfuron Methyl 20SG on fields having a soil pH above 7.9, as extended soil residual activity could extend crop rotation intervals beyond those specified in the rotation table, and under certain conditions, could injure wheat or barley. In addition, other crops planted in high-pH soils can be extremely sensitive to low concentrations of Metsulfuron Methyl 20SG.

Before using Metsulfuron Methyl 20SG, determine the soil pH of the field. To obtain a representative pH value, take several samples from different areas of the field between 0" and 4" deep and analyze them separately. Consult local extension publications for additional information on advised soil sampling procedures. Before using Metsulfuron Methyl 20SG carefully consider your crop rotation plans and options.

For rotational flexibility, **do not** treat all of your wheat, barley, or fallow acres at the same time.

Rotation Intervals for Non Cereal Crops- Grain Sorghum, Sulfonylurea Tolerant (STS) Soybeans, Imidazolinone-Resistant (IR) Corn, Proso Millet- Irrigated/Non Irrigated Land following wheat, or barley at the Maximum Use Rates listed in the following table:

Areas	Crop	Soil pH	Maximum Use Rate (oz/acre)	Rotation Interval (months)*
All Areas of TX, OK, KS, NE and CO	Grain Sorghum, Sulfonylurea Tolerant (STS) Soybeans, Imidazolinone-Resistant (IR) Corn, Proso Millet	7.9 or lower	0.3	4

* The minimum rotation interval represents the period of time from the last application to the anticipated date of the next planting. Rotation intervals are based on normal precipitation/irrigation amounts.

Restrictions

- These directions **do not** apply to crops grown for seed.

Precautions

- Methyl 20SG is non-corrosive, nonflammable, non-volatile, and does not freeze in storage.
- Under certain conditions (including drought, prolonged cold weather, pH variability in the fields) temporary discoloration and/or crop injury may occur to sorghum, Sulfonylurea Tolerant (STS) soybeans, Imidazolinone-Resistant (IR) corn, and Proso Millet planted after Metsulfuron Methyl 20SG applications.

SELECTIVE WEEDING TO AID IN THE ESTABLISHMENT AND MAINTENANCE OF GRASSES IN THE CONSERVATION RESERVE PROGRAM

Apply Metsulfuron Methyl 20SG Herbicide to control or suppress certain broadleaf weeds (refer to the label for weeds controlled and suppressed) in the following perennial native or improved grasses grown on land enrolled in the Conservation Reserve Program (CRP):

Blue Grass	Lovegrasses -	Siberian -
Bluestems -	atherstone	slender
big	sand	stream bank
little	weeping	tall
plains	wilman	thickspike
sand		western
WWspar	Orchardgrass	
Buffalograss	Sideoats grama	Wildrye grass- Russian
Green sprangletop	Switchgrass - blackwell	
Indiangrass	Wheatgrasses -	
Kleingrass	bluebunch	
	crested	
	intermediate	
	pubescent	

Metsulfuron Methyl 20SG provides postemergence activity and offers short-term residual control or suppression of labeled weeds.

Degree of control and duration of effect depend on weed spectrum and density; weed size and variability; amount of cover canopy; growing conditions prior to, at and following application; amount and timing of precipitation; and spray coverage.

Maximize potential for grass establishment by consulting with the Soil Conservation Service or other local experts concerning planting techniques and other cultural practices.

APPLICATION TIMING

Preplant (prior to planting)

Metsulfuron Methyl 20SG may be applied prior to planting at not more than 0.3 oz/A (0.0038 lb ai/A) on all labeled grasses except orchard grass and Russian wildrye grass.

Preemergence (after planting but before grass emergence)

Metsulfuron Methyl 20SG may be applied after planting, but before grass emergence, at not more than 0.3 oz/A (0.0038 lb ai/A) on all labeled grasses except orchard grass and Russian wildrye grass.

Early postemergence to new plantings

Metsulfuron Methyl 20SG may be applied at not more than 0.3 oz/ A (0.0038 lb ai/A) on all labeled grasses anytime after grass emergence. Because grass species differ in time of emergence, apply only after majority of grasses are in the 3- to 4-leaf stage.

Early postemergence applications to stands planted the previous season

Metsulfuron Methyl 20SG may be applied at not more than 0.3 oz/A (0.0038 lb ai/A) on all labeled grasses if most grasses have one or more leaves.

Late postemergence (tillered stands) to stands planted the previous season

Metsulfuron Methyl 20SG may be applied at not more than 0.3 oz/ A (0.0038 lb ai/A) to all labeled grasses in all labeled states.

WEED CONTROL

For best weed control performance, use Metsulfuron Methyl 20SG in a tank mix with 2,4-D (ester formulations perform best). Read and follow all manufacturer's label directions for the 2,4-D used. If those directions conflict with this label, **do not** tank mix the 2,4-D with Metsulfuron Methyl 20SG

Apply Metsulfuron Methyl 20SG preemergence to weeds or postemergence to small actively growing weeds before they exceed 4" in height or diameter. For all postemergence applications, add a surfactant at labeled rates.

One to two inches of rainfall (enough to wet the top 2-3 inches of soil profile) may be needed to move the herbicide into the weed root zone before the next flush of weeds emerge. The amount of moisture required for sufficient activation increases with crop or weed residue and for finer textured soils. Without sufficient rainfall to move Metsulfuron Methyl 20SG into the weed root zone, weeds that germinate after treatment will not be controlled.

Avoid postemergence applications to weeds which are not actively growing due to adverse weather conditions. Weeds hardened off by cold weather or drought stress may not be adequately controlled.

Performance: Because newly planted CRP grass stands **do not** sufficiently compete with weeds and because weed pressure in CRP fields is often severe, performance from Metsulfuron Methyl 20SG may not always be satisfactory. An additional herbicide application or mowing may be needed.

TANK MIXTURES

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If the instructions on the tank mix partner label conflicts with this Metsulfuron Methyl 20SG label, **do not** use in a tank mixture with Metsulfuron Methyl 20SG.

Preplant

Metsulfuron Methyl 20SG may be tank mixed with Glyphosate or Glyphosate + 2,4-D containing products as a preplanting treatment to control broadleaf and grassy weeds. When using Glyphosate + 2,4-D tank mix, allow at least 7 days after application before planting grasses. Refer to the tank mix partner fact sheets and labels for all use instructions, label rates, weed control claims, warnings and precautions.

Postemergence

Metsulfuron Methyl 20SG can be tank mixed with 2,4-D at labeled rates for all labeled grasses larger than the 5-leaf stage. For fully tillered stands use higher rates. Refer to the tank mix partner fact sheets and labels for all use instructions, label rates, weed control claims, warnings and precautions.

Metsulfuron Methyl 20SG can also be tank mixed with dicamba containing products at labeled rates after most grasses are in the 3-leaf stage. In established grasses (2nd year stands), use dicamba containing products at higher rates plus Metsulfuron Methyl 20SG. Refer to the tank mix partner fact sheets and labels for all use instructions, label rates, weed control claims, warnings and precautions.

Surfactant may be added at 1/2 to 1 qt per 100 gallons of spray solution. However, the addition of surfactant may increase the chance of grass injury.

Restrictions

- **Do not** apply to frozen ground where surface runoff may occur.
- **Do not** apply when snow covers the ground.
- **Do not** treat stands showing winter stress or lack of vigor symptoms as grass injury may occur.
- **Do not** use more than 0.6 ounce (0.0045 lb ai/A) per acre per single application.
- **Do not** use more than 0.6 ounce (0.0045 lb ai/A) per acre per year.
- **Do not** exceed one application of Metsulfuron Methyl 20SG per year

Precautions

- Legumes in a seeding mixture may be severely injured or killed following an application of Metsulfuron Methyl 20SG.
- Under certain conditions including high soil pH, heavy rainfall, prolonged cool weather, or frost conditions just prior to or soon after application, temporary discoloration or stunting of the grasses may occur.
- Because cultivars of perennial grass differ in their sensitivity to herbicides, limit the first use of Metsulfuron Methyl 20SG to a small area prior to adoption as a field practice. Likewise, components in a seed mixture will vary in sensitivity to Metsulfuron Methyl 20SG so that the final stand may not reflect seed ratio.

RECROPPING INTERVALS FOR GRASSES ON CONSERVATION RESERVE PROGRAM (CRP)

ROTATION INTERVAL FOR PLANTING GRASSES ON CONSERVATION RESERVE PROGRAM (CRP) ACRES

Whenever Metsulfuron Methyl 20SG has previously been used in wheat, barley, or fallow, the following grasses may be planted after the intervals specified in the tables below. **The planting of grass and legume mixtures is not advised as injury to the legume may occur.**

Bentgrasses	Lovegrasses – (Sand, Weeping)
Bluegrama	Orchardgrass (excluding Piaute)
Bluestems (Big, Little, Plains, Sand, WW Spar)	Prarie sandreed
Buffalograss	Sand dropseed
Galleta	Sheep fescue
Green needlegrass	Sideoats grama
Green sprangletop	Switchgrass
Indiangrass	Wheatgrasses (Crested, Intermediate, Pubescent, Slender, Streambank, Tall, Thickspike, Western)
Indian ricegrass	Wild rygrasses (Beardless, Ruaasian)

Rotation Intervals in MN, MT, ND, SD, and Northern WY		
Soil pH*Grasses	Use rate	Minimum Interval for Planting
7.3 or lower	0.3 oz/A (0.0038 lb ai/A)	4 months (all grasses)
7.6 to 7.9	0.3 oz/A (0.0038 lb ai/A)	4 months (Wheatgrasses only)
Rotation Intervals in AR, CO, ID, KS, LA, NE, NM, OK, OR, TX, UT, WA, Southern WY:		
Soil pH*Grasses	Use rate	Minimum Interval for Planting
7.9 or lower	0.3 oz/A (0.0038 lb ai/A)	2 months (all grasses)

BIOASSAY

A field bioassay must be completed before rotating to any crop not listed (See the Rotation Intervals table), or if the soil pH is not in the specified range, or if the use rate applied is not specified in the table, or if the minimum cumulative precipitation has not occurred since application.

Field Bioassay

To conduct a field bioassay, grow test strips of the crop or crops you plan to grow the following year in fields previously treated with Metsulfuron Methyl 20SG. Crop response to the bioassay will indicate whether or not to rotate to the crop(s) grown in the test strips. If a field bioassay is planned, check with your local Agricultural dealer or FMC representative for information detailing the field bioassay procedure.

FOR WEED CONTROL IN SUGAR CANE IN THE STATE OF HAWAII

INFORMATION ON RESISTANT WEEDS

Naturally-occurring weed biotypes resistant to this product are known to exist in Hawaii sugar cane. To delay the development of resistant biotypes, refer to our resistance management guidelines.

WEED CONTROL IN SUGAR CANE: For best weed control or weed suppression, apply Metsulfuron Methyl 20SG as a preplant/ preemergence broadcast application or as postemergence direct spray application to weeds when environmental conditions favor active growth of broadleaf weeds. Unless otherwise directed, always include a surfactant at 0.25 to 0.50% V N for postemergence mixture.

PREPLANT/PREEMERGENCE APPLICATION: Apply as a broadcast application at a rate of 2.5 to 10 oz per acre (0.0312 to 0.1250 lb ai/A) with ground equipment or air. Make application before crop emerges as crop injury to some varieties may occur.

POSTEMERGENCE APPLICATION: Apply as a directed spray application to emerged weeds at rates of 2.5 to 10 oz per acre (0.0312 to 0.1250 lb ai/A) with ground equipment or by hand equipment. Avoid contact with the sugar cane foliage as injury may occur.

WEEDS CONTROLLED

Metsulfuron Methyl 20SG will control several broadleaf weeds including:

<i>Amaranthus sp.</i>	<i>Euphorbia sp. (Spurge)</i>	<i>Crotalaria sp.</i>
<i>Ipomoea triloba (Aiea Morningglory)</i>	<i>Momordica charantia (Perla)</i>	<i>Ageratum sp.</i>
<i>Portulaca sp. (Purslane)</i>	<i>Erigeron canadensis (Fireweed)</i>	<i>Crassocephalum crepidioides (Thick head)</i>

WEEDS PARTIALLY CONTROLLED

Chloris injlata (Swollen fingergrass)

RESTRICTIONS:

Crop/Use	Application Timing	Maximum Product Oz/A per Single Application	Maximum AI lb/A per Single Application	Maximum Oz/A of Product per Year	Maximum AI lb/A per Year	Maximum Number of Applications per Year	Minimum Treatment Interval (Days)	Pre- Harvest Interval, Days
Sugar Cane in the State of Hawaii	For best weed control or weed suppression, apply Metsulfuron Methyl 20SG as a preplant/ preemergence broadcast application or as postemergence direct spray application to weeds when environmental conditions favor active growth of broadleaf weeds.	10	0.1250	18.75	0.2344	2	14	16 months

- **Do not** apply Metsulfuron Methyl 20SG closer than 16 months before harvest.
- **Do not** use more than 10 ounces (0.1250 lb ai/A) per acre per single application.
- **Do not** use more than 18.75 ounces (0.2344 lb ai/A) per acre per year.
- **Do not** use liquid fertilizer in addition to or as a substitute for a surfactant.
- **Do not** use on soils with pH greater than 7.9 (for example, highly calcareous soils) if the following crop is sensitive to Metsulfuron Methyl 20SG. Extended soil residual activity could adversely affect minimum rotation intervals for all crops.
- **Do not** apply to irrigated land where tailwater will be used to irrigate crops other than sugar cane. Varieties of sugar cane may differ in their sensitivity to herbicides and some varieties can be adversely affected with post emergence applications. Therefore, install a small test block prior to large scale applications.
- **Do not** apply Metsulfuron Methyl 20SG to sugar cane that is stressed by severe weather conditions, drought, low fertility, water saturated soil, disease or insect damage, as crop injury may result.

PRECAUTIONS

- Under certain conditions including heavy rainfall, temporary discoloration and/or crop injury may occur. To reduce the potential for movement of treated soil due to wind erosion, **do not** apply to powdery dry or light sandy soils until they have been stabilized by rainfall, trashy mulch, reduced tillage or other cultural practices.
- Injury to adjacent crops may occur when treated soil is blown onto land used to produce other crops. For ground applications applied to weeds when dry, dusty field conditions exist, control of weeds in wheel track areas may be reduced.
- Metsulfuron Methyl 20SG must be cleaned from application equipment according to cleanup procedures described in the Sprayer Cleanup section of the Metsulfuron Methyl 20SG EPA-registered label.
- For PREPLANT/PREEMERGENCE applications, make application before crop emerges as crop injury to some varieties may occur.
- For POSTEMERGENCE applications, avoid contact with the sugar cane foliage as injury may occur.

BIOASSAY

A field bioassay must be completed before rotating to any crop not listed (See the Rotation Intervals table), or if the soil pH is not in the specified range, or if the use rate applied is not specified in the table, or if the minimum cumulative precipitation has not occurred since application.

Field Bioassay

To conduct a field bioassay, grow test strips of the crop or crops you plan to grow the following year in fields previously treated with Metsulfuron Methyl 20SG. Crop response to the bioassay will indicate whether or not to rotate to the crop(s) grown in the test strips.

If a field bioassay is planned, check with your local Agricultural dealer or FMC representative for information detailing the field bioassay procedure.

GRAZING

There are no grazing restrictions on Metsulfuron Methyl 20SG.

PRECAUTIONS

Treated vegetation may be cut for forage or hay.

MIXING INSTRUCTIONS

1. Fill the tank 1/4 to 1/3 full of water (If using liquid nitrogen fertilizer solution in place of water, see Tank Mixtures sections for additional details).
2. While agitating, add the required amount of Metsulfuron Methyl 20SG.
3. Continue agitation until the Metsulfuron Methyl 20SG is fully dispersed, at least 5 minutes.
4. Once the Metsulfuron Methyl 20SG is fully dispersed, maintain agitation and continue filling tank with water. Metsulfuron Mix Methyl 20SG thoroughly with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) then add the necessary volume of nonionic surfactant. Always add surfactant last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply Metsulfuron Methyl 20SG spray mixture within 24 hours of mixing to avoid product degradation.
8. If Metsulfuron Methyl 20SG and a tank mix partner are to be applied in multiple loads, pre-slurry the Metsulfuron Methyl 20SG in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the Metsulfuron Methyl 20SG.

RESTRICTIONS:

- **Do not** use Metsulfuron Methyl 20SG with spray additives that reduce the pH of the spray solution to below 3.0.

SPRAY EQUIPMENT

For specific application equipment, refer to the manufacturer's specifications for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc.

Be sure to calibrate air or ground equipment properly before application. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better coverage when the crop canopy is dense. Avoid swath overlapping, and shut off spray booms while starting, turning, slowing, or stopping to avoid crop injury.

Do not make applications using equipment and/or spray volumes or under weather conditions that might cause spray to drift onto nontarget sites. For additional information on spray drift, refer to the **Spray Drift Management** section of the label.

Continuous agitation is required to keep Metsulfuron Methyl 20SG in suspension.

SPRAYER CLEANUP

Spray equipment must be cleaned before Metsulfuron Methyl 20SG is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the six steps outlined in **After Spraying Metsulfuron Methyl 20SG** section of this label.

At the End of the Day

When multiple loads of Metsulfuron Methyl 20SG herbicide are applied, it is advised that at the end of each day of spraying, the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits that can accumulate in the application equipment.

After Spraying Metsulfuron Methyl 20SG and Before Spraying Crops Other Than Wheat, Barley, or Fallow

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of Metsulfuron Methyl 20SG as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal of household ammonia* (contains 3% active) for every 100 gal of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only Ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) specified on this label. **Do not** exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.
* Equivalent amounts of an alternate-strength ammonia solution or a FMC-approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your agricultural dealer, applicator, or FMC representative for a listing of approved cleaners.

Notes:

1. **Attention: Do not** use chlorine bleach with ammonia, as dangerous gases will form. **Do not** clean equipment in an enclosed area.
2. Steam-cleaning aerial spray tanks is advised prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When Metsulfuron Methyl 20SG is tank mixed with other pesticides, examine all required cleanout procedures and follow the most rigorous procedure.
4. In addition to this cleanout procedure, follow all precleanout guidelines on subsequently applied products as per the individual labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of Metsulfuron Methyl 20SG and applications of other pesticides to Metsulfuron Methyl 20SG-sensitive crops during the same spray season, it is advised that a sprayer be dedicated to Metsulfuron Methyl 20SG to further reduce the chance of crop injury.

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Boom Applications:

- Apply with the nozzle height advised by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- **Do not** apply when wind speeds exceed 10 miles per hour at the application site.
- **Do not** apply during temperature inversions.

Aerial Applications:

- **Do not** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use one-half swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **Do not** apply when wind speeds exceed 10 miles per hour at the application site.
- **Do not** apply during temperature inversions.

Boom-less Ground Applications:

- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1) for all applications.
- **Do not** apply when wind speeds exceed 10 miles per hour at the application site.
- **Do not** apply during temperature inversions.

SPRAY DRIFT MANAGEMENT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure advised for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers directions for setting up nozzles. Generally, to reduce fine droplets, orient nozzles parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom must remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aurally to crops, **do not** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

HANDHELD TECHNOLOGY APPLICATIONS:

Take precautions to minimize spray drift.

BOOM-LESS GROUND APPLICATIONS

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Council of Producers & Distributors of Agrotechnology CPDA).

IDENTIFICATION INFORMATION FOR PRODUCTS REFERENCED IN THIS LABEL

REGISTERED PRODUCTS REFERENCED IN THIS LABEL FOR TANK MIXTURES OR MENTIONED FOR OTHER REASONS		
Product Name	Active Ingredient(s)	EPA Registration Number
Colt®+Salvo® Herbicide	2,4-D + Fluroxypyr	34704-1010
Colt®+Sword® Herbicide	2,4-D + Fluroxypyr	34704-1011
EXPRESS® Herbicide (with TotalSol® Soluble Granules)	Tribenuron methyl	279-9594
HARMONY® Extra SG (with TotalSol® Soluble Granules)	Thifensulfuron methyl, Tribenuron methyl	279-9602
Maverick® Herbicide	Sulfosulfuron	524-500
Starane® Flex Herbicide	Florasulam + Fluroxypyr	62719-604
Starane® NXT Herbicide	Fluroxypyr + Bromoxynil	62719-557

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage: Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling: Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down): Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners: Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

Refillable Fiber Drums With Liners: Refillable container (fiber drum only). *Refilling Fiber Drum:* Refill this fiber drum with ALLY XP herbicide containing metsulfuron methyl only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. *Disposing of Fiber Drum and/or Liner:* Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

All Other Refillable Containers: Refillable container. Refilling Container: Refill this container with ALLY XP herbicide containing metsulfuron methyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact CHEMTREC at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact CHEMTREC at the number below for instructions. Disposing of Container: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact CHEMTREC (Transportation and Spills) at 1-800-424-9300, day or night.

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CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and, to the extent consistent with applicable law, Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) Seller or FMC, and, to the extent permitted by applicable law, Buyer assumes the risk of any such use.

To the extent consistent with applicable law, FMC or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Condition of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.